

Amendment to the Claims:

Please amend the claims as follows:

Please cancel claims 107 to 112, without prejudice.

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claims 1 to 59 (canceled)

Claim 60 (currently amended): A method for improving the nutritional value of a phytate-containing foodstuff comprising:

contacting said phytate-containing foodstuff with a substantially pure or recombinant phytase enzyme having an amino acid sequence as set forth in SEQ ID NO:10, such that said substantially pure or recombinant phytase catalyzes the liberation of inorganic phosphate [[phosphatase]] from the phytate in said phytate-containing foodstuff.

Claim 61 (currently amended): The method of claim 60, wherein said substantially pure or recombinant phytase enzyme is produced by a recombinant expression system comprising a phytase-encoding nucleic acid having a nucleotide sequence selected from the group consisting of:

- a) SEQ ID NO:9;
- b) SEQ ID NO:9, wherein T can also be U;
- c) a nucleic acid sequence encoding the amino acid sequence of SEQ ID NO:10, wherein the expression of the phytase-encoding nucleic acid leads to the production of said substantially pure or recombinant phytase enzyme; and
- d) SEQ ID NO:7, wherein 389 is G; 390 is A; 437 is T; 438 is G; 439 is G; 470 is C; 472 is T; 476 is T; 477 is G; 478 is T; 689 is G; 690 is A; 691 is G; 728 is T; 729 is A; 730 is T; 863 is T; 864 is G; 1016 is G [[, or any combination thereof]].

Claim 62 (original): The method of claim 60, wherein the liberation of the inorganic phosphate from the phytate in said phytate-containing foodstuff occurs prior to the ingestion of said phytate-containing foodstuff by a recipient organism.

Claim 63 (original): The method of claim 60, wherein the liberation of the inorganic phosphate from the phytate in said phytate-containing foodstuff occurs after the ingestion of said phytate-containing foodstuff by a recipient organism.

Claim 64 (original): The method of claim 60, wherein the liberation of the inorganic phosphate from the phytate in said phytate-containing foodstuff occurs in part prior to and in part after the ingestion of said phytate-containing foodstuff by a recipient organism.

Claims 65 to 90 (canceled)

Claim 91 (currently amended): The method of claim 61, wherein the recombinant expression system comprises a vector comprising said phytase-encoding nucleic acid or a structural gene comprising a phytase-encoding nucleic acid under control of a regulatory region.

Claim 92 (currently amended): The method of claim 91, wherein the recombinant expression system or the structural gene comprising the phytase-encoding nucleic acid under control of a regulatory region further comprises [[is within]] a host cell.

Claim 93 (previously presented): The method of claim 61, wherein said phytase-encoding nucleic acid is operably linked to a polynucleotide encoding a signal peptide.

Claim 94 (previously presented): The method of claim 61, wherein said phytase-encoding nucleic acid is operably linked to a transcription control sequence operable in a plant cell, a plant part or a plant.

Claim 95 (previously presented): The method of claim 94, wherein the control sequence comprises a tissue-specific promoter that is specific for the plant cell, plant part or plant.

Claim 96 (previously presented): The method of claim 94, wherein the control sequence comprises a constitutive promoter.

Claim 97 (previously presented): The method of claim 60, wherein the foodstuff is for a non-ruminant animal.

Claim 98 (previously presented): The method of claim 60, wherein the foodstuff is for a monogastric animal.

Claim 99 (previously presented): The method of claim 94, wherein the plant cell, plant part, or plant is of a dicotyledonous species.

Claim 100 (previously presented): The method of claim 94, wherein the plant cell, plant part, or plant is of a monocotyledonous species.

Claim 101 (previously presented): The method of claim 60, wherein the foodstuff is an animal feed.

Claim 102 (previously presented): The method of claim 62, wherein the foodstuff is an animal feed.

Claim 103 (previously presented): The method of claim 63, wherein the foodstuff is an animal feed.

Claim 104 (previously presented): The method of claim 64, wherein the foodstuff is an animal feed.

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Claim 105 (previously presented): The method of claim 97, wherein the foodstuff is an animal feed.

Claim 106 (previously presented): The method of claim 98, wherein the foodstuff is an animal feed.

Claims 107 to 112 (canceled)